CHENMKO ENTERPRISE CO.,LTD

Lead free devices

SURFACE MOUNT
NPN Digital Silicon Transistor
VOLTAGE 50 Volts   CURRENT 100 mAmpere

CHDTC144GKPT

APPLICATION

* Switching circuit, Inverter, Interface circuit, Driver circuit.

FEATURE

* Small surface mounting type. (SC-59/SOT-346)
* High current gain.
* Suitable for high packing density.
* Low colloector-emitter saturation.
* High saturation current capability.
* Internal isolated NPN transistors in one package.
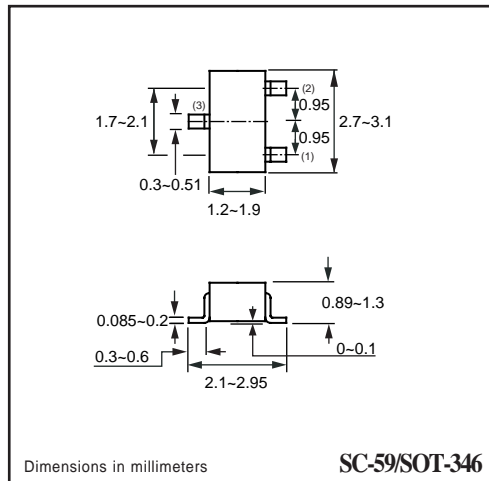* Built in bias resistor(R1=47kΩ, Typ.)

CONSTRUCTION

* One NPN transistors and bias of thin-film resistors in one package.

MARKING

GKC
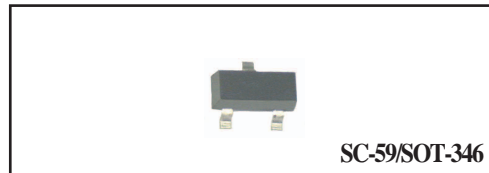
CIRCUIT
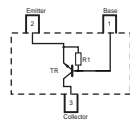

SC-59/SOT-346

Dimensions in millimeters   **SC-59/SOT-346**

LIMITING VALUES

In accordance with the Absolute Maximum Rating System .

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-Base voltage		50	V
V_{CEO}	Collector-Emitter voltage		50	V
V_{EBO}	Emitter-Base voltage		5	V
$I_{C(Max.)}$	Collector current		100	mA
P_D	Power dissipation	$T_{amb} \leq 25\ ^{o}C$, Note 1	200	mW
T_{STG}	Storage temperature		$-55\ +150$	^{o}C
T_J	Junction temperature		$-55\ +150$	^{o}C
$R\theta_{J-S}$	Thermal resistance , Note 1	junction - soldering point	140	$^{o}C/W$

Note

1. Transistor mounted on an FR4 printed-circuit board.

2003-12

RATING CHARACTERISTIC (CHDTC144GKPT)

CHARACTERISTICS

T_{amb} = 25 °C unless otherwise speciÞed.

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
BV_{CBO}	Collector-Base breakdown voltage	I_C=50uA	50.0	–	–	V
BV_{CEO}	Collector-Emitter breakdown voltage	I_C=1mA	50.0	–	–	V
BV_{EBO}	Emitter-Base breakdown voltage	I_E=160uA	5.0	–	–	V
$V_{CE(sat)}$	Collector-Emitter Saturation voltage	I_C=10mA; I_B=0.5mA	–	–	0.3	V
I_{CBO}	Collector-Base current	V_{CB}=50V	–	–	0.5	uA
I_{EBO}	Emitter-Base current	V_{EB}=4V	65	–	130	uA
h_{FE}	DC current gain	I_C=5mA; V_{CE}=5.0V	68	–	–	
R_1	Input resistor		32.9	47	61.1	KΩ
f_T	Transition frequency	I_E=-5mA, V_{CE}=10.0V f=100MHz	–	250	–	MHz

Note
1.Pulse test: tp≤300uS; δ ≤0.02.